CHAPTER 3. REGULATORY ANALYSIS

Summary

This chapter examines regulations that apply to the nearshore and identifies gaps in the regulatory system that are causing problems for nearshore habitat. The people interviewed for this report identified a number of activities that they felt the current regulatory system does not address adequately. The focus here is on the most significant gaps in the current regulations that exist as a result of limited authorities or other factors. A full description of the key regulations and authorities affecting nearshore habitats is provided in Appendix A.

Several residential construction activities that concern regulators are specifically exempt from the permit requirements of the Shoreline Management Act and are considered to have insignificant environmental impacts under the U.S. Army Corps of Engineers (Corps) nationwide permit system. In 1972 when the Shoreline Management Act was enacted, docks, piers and bulkheads were considered "normal, protective and common appurtenances for single family residences" that aroused minimal environmental concern. Today, many state and local officials view them as problematic features that are destroying and degrading habitat. Interviewees identified other activities, such as residential development and upland runoff, as potentially destructive to the nearshore environment that are not well regulated through the current system.

Major Regulatory Issues

Those interviewed generally agreed that, although residential development causes a variety of impacts to nearshore habitat, it undergoes much less scrupulous review than proposals for commercial or industrial projects. Opinions were mixed as to how well the regulatory process addresses effects of larger projects, particularly those outside urban areas. There is debate as to whether these projects create huge losses of habitat functions or whether proper siting and mitigation prevent those losses.[1] Resource managers recognize that the effects of large projects in heavily urbanized areas are not being adequately mitigated. In some cases, these development projects may impact the last habitats—those habitats of critical importance because all others are gone. Adding to the concern is the fact that compensatory mitigation may not be achieving needed results. New concerns are emerging over the lack of appropriate regulation for upland runoff from various sources, which degrades nearshore habitats.

Another major regulatory issue is the site-by-site consideration of projects with no ability to account for and assess the cumulative effects of a variety of development activities—from small residential projects to large commercial and industrial development projects. Using shoreline armoring as an example, a 1995 study stated, "while individual,

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[1] Mitigation is a general term used to describe a series of management options to reduvce the effect of development projects. It begins with avoidance, minimization, rectification, reduction over time, compensating for impact through replacement or enhancement and finally, monitoring. See Executive Order 90-04.

small armoring projects may have little measurable ecological effect, incremental increases in the number of small projects within an embayment would be expected to result in significant effects to the bay ecosystem" (Shreffler et al., 1995).

Under the federal Clean Water Act and the National Environmental Policy Act (NEPA), the Corps has the authority and, in fact, the responsibility to consider cumulative impacts of specific activities to the environment. As a practical matter, however, Corps staff say that they do not have the time or funding to take on such a project. Consideration of cumulative effects is not unprecedented for the Corps, however. A few years ago, the agency helped determine cumulative effects of docks in Lake Washington after the local community expressed considerable concern about negative impacts of too many docks.

Without the ability to measure or understand cumulative effects, the authority to consider cumulative impacts within the regulatory context will continue to be a relatively meaningless exercise. Several people expressed the need for a method of identifying cumulative effects from docks and shoreline armoring.

Regulatory Framework

Many different regulations apply to various activities in the nearshore environment. Regulations are administered at the local, state and federal levels and through tribal governments on tribal lands. Responsibility for protection of marine life and habitats below the ordinary high-water line falls to the Washington Department of Fish and Wildlife (Fish and Wildlife). The Corps's responsibility includes many development activities below the mean, higher high-water mark, but the Corps focuses most of its authority on non-residential development activities.

Above ordinary high-water line, the nearshore area is divided into 12 counties, 34 cities, eight tribal reservations, several federal facilities, and numerous state-owned parks. Each jurisdiction regulates its piece of Puget Sound shoreline differently. The primary tool for regulating development activities at the local level are local shoreline master programs.

This piecemeal approach to managing the shoreline does not allow for Puget Sound to be managed as an ecosystem. Each local jurisdiction manages its slice of shoreline and local governments tend to focus on the lands above high water. Fish and Wildlife has the expertise to look at nearshore resources from an ecosystem perspective and manage them holistically. Unfortunately, the Hydraulics Code (see Appendix A) does not give Fish and Wildlife that type of broad authority, limiting the department's abilities to participate in planning and regulatory efforts above the ordinary high-water line. Habitat biologists with Fish and Wildlife work extensively with local shoreline planners and provide habitat expertise that is otherwise not available. Many local planners said that this relationship is very helpful.

The Washington Department of Natural Resources (Natural Resources) also plays a significant role in the nearshore area ñ it owns and manages 30 percent of the tidelands and all of the submerged lands (bedlands) in Puget Sound. Although, Natural Resources is not a regulatory agency, it does have proprietary interests and responsibilities (see Appendix A). To date, Natural Resources has not approved specific policies to protect these lands and their resources. The department relies on local government, other state agencies, and

federal programs to ensure state lands are protected from environmental degradation. Its leasing program often must accommodate activities that may be detrimental to the nearshore environment. Natural Resources has not consistently applied policies in leases to ensure adequate environmental protection of leased lands.

Agency Roles in the Permitting Process

Following is an example of the roles different agencies play in residential bulk-head projects and the construction of docks and piers. Interviewees mentioned these two activities frequently as activities of concern that affect the nearshore environment.

Bulkheads and other armoring proposals require a Hydraulics Project Approval (HPA) permit and are reviewed by field biologists from Fish and Wildlife. Although the jurisdiction of Fish and Wildlife stops at the ordinary high-water line, the construction of a bulkhead above the line usually involves construction equipment and activity below the high-water line and therefore falls within department's purview. The Corps, on the other hand, generally does not get involved with residential armoring projects because they fall within the nationwide permit system. As mentioned earlier, local governments can use their broad authority to dictate very strict or lenient criteria for bulkhead construction. Fish and Wildlife has limited authority under the Hydraulics Code and may condition a bulkhead permit (most often commenting on the timing of the construction or requiring placement of gravel at the toe). The department cannot review an application for erosion needs. When local governments standards for shoreline armoring projects are lenient, Fish and Wildlife's role is critical to ensure that impacts to the nearshore environment is minimized during construction of the bulkhead.

Construction of docks and piers goes through a similar regulatory process. They generally get minimal local review, but do require an HPA permit. Fish and Wildlife usually prescribes certain conditions such as ensuring that light can penetrate the dock surface and working with applicants to minimize the over-all size of the dock. The department does not question the need for the project. The Corps gets involved in some dock projects—it can review the proposal for both environmental and navigation concerns. Usually, the Corps does not deny a permit except for navigational concerns.

The tremendous variation in local regulations translates into very different treatment of the nearshore area by local jurisdictions throughout Puget Sound. For example, local governments manage residential bulkhead construction in a variety of ways:

- Some counties process all bulkheads as exemptions and require little review or justification for the proposals.

- Several counties process the majority of bulkhead proposals as substantial development projects and approve only projects that document through a geotechnical survey that a residence is threatened by erosion.

- Bainbridge Island prohibits any bulkhead proposal unless a residence is threatened and there is another bulkhead within 100 feet.

Positive changes are being made to strengthen shoreline master programs and critical areas ordinances and the way they are administered. The adoption of critical areas ordinances provided an opportunity for many jurisdictions to tighten regulations regarding steep slopes, which include shoreline bluffs. Many counties said that setback requirements for shoreline development are found in their critical areas ordinance rather than their shoreline master program. The ordinances often require a geotechnical evaluation and report in order to better locate the residence, determine adequate set-back and evaluate the potential erosion of the beach or bluff. A few counties have amended their programs since adopting them, but many remain untouched. Where amendments have been made, the changes allow more emphasis on alternative solutions to bulkheads and more stringent criteria for the review of bulkhead proposals.

Although local governments are changing the way they review shoreline armoring proposals, the review and restriction of residential docks and piers has proven more difficult. Officials from San Juan County expressed some concerns about the proliferation of docks in some areas in the county, and said they have only used "viewshed" concerns as a reason for denying requests. If a review determines that a project is interfering with a neighbors view, it may be denied.

Summary of Specific Gaps in the Current Regulatory System

1. Single-family residential construction projects are reviewed with different levels of concern depending on the jurisdiction. Local governments may review shoreline projects more stringently than is written in the guidance for shoreline master programs, but only a few have chosen to use that authority. Many local governments minimally review projects that fall under the exempt category and rely on the Department of Fish and Wildlife to provide additional review.

2. Compensatory mitigation is generally not required for construction projects such as bulkheads and docks at single-family residences. With every residential project that is not mitigated, a loss of nearshore habitat may occur as a result of habitat alteration and / or a loss of the functions of the habitat.

3. The Department of Natural Resources owns and manages 30 percent of Puget Sound tidelands and all its bedlands. The department leases its lands through long-term agreements, but does not consistently enforce its own environmental policies in the leases. Eelgrass is often used as an example of a resource that does not receive consistent protection in the language of Natural Resources' leases. Activities on leased land should not damage the resources and lessees should be held responsible to monitor and ensure that no damage occurs.

4. Current knowledge and understanding of cumulative effects of development activities on the nearshore environment limits the ability of regulatory agencies to address these effects. Agencies and local governments issue permits on a site-specific basis without considering the effect of multiple projects on the environment and resources largely because they don't know how to build those considerations into the permit process. Additionally, permit-tracking systems available within agencies are limited, making the task of determining current impacts and potential long-term effects even more difficult.

5. Shoreline master programs and critical areas ordinances are the primary tools for regulating shoreline development activities, but are often written and implemented without consideration of nearshore resources. Many of these regulations need updating to reflect better understanding of human impacts to nearshore resources and the presence of those resources. Local zoning also serves to guide shoreline development, but does not usually consider the effects of the development to the nearshore environment.

6. Responsibility for managing and regulating the nearshore is divided among Puget Sound counties, cities, tribes, and state and federal agencies. At the local level, the shoreline is regulated by the shoreline management program of each individual jurisdiction. This structure limits the ability of government agencies to holistically evaluate and manage the nearshore environment of Puget Sound. No single agency is responsible for assessing effects of development. The Department of Fish and Wildlife's primary concern is protecting fish and wildlife and it tracks only permits issued through its HPA process. The Department of Ecology reviews specific substantial development permits. Only local governments and tribes have the authority to evaluate the need for shoreline armoring projects. The Department of Natural Resources has been concerned primarily with its proprietary responsibilities. This structure creates a confusing permit process that gives the appearance of bureaucratic overkill, but in reality contains many gaps and little oversight.

7. Runoff from shoreline and upland areas are affecting the quality of nearshore habitat, but are not often considered in nearshore regulations. Regulations that pertain to the nearshore largely focus on physical alteration and activities. Although regulations that apply to water quality and runoff problems exist, the effect to the nearshore environment generally is not a consideration. Planning processes to consider nonpoint sources of pollution and runoff problems often stop at the water's edge.

8. The current system gives local government substantial authority and responsibility for protecting the shoreline. Where local governments are not using that authority, it is difficult for a state or federal agency to intervene because state and federal authorities, such as HPAs and nationwide permits, are limited.

9. Enforcement is important but extremely difficult. For example, it is very difficult to enforce guidelines on removing vegetation at the shoreline edge, particularly if the removal occurs incrementally. It is also difficult to get compensation where illegal activities occur. All enforcement activities are staff intensive and end up fairly low on the list of priorities for staff time.

10. Due to exemptions and the need to balance concerns about the economy and private property, many regulations are not fulfilling their own goals to protect and preserve the nearshore environment. State and federal regulations include language to facilitate development. For example, the Shoreline Management Act states that, "it is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses...This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto." While the Shoreline Management Act and the federal

Clean Water Act exist to minimize the effects of development, these regulations do not necessarily enable agencies to deny projects based on significant impacts. The ability to demonstrate a significant level of degradation is often difficult due to the lack of scientific data or agreement on what is considered a significant level of harm to the resources.

Other Needs

A variety of other issues relevant to protecting the nearshore environment were identified during the interviews and include the following:

1. Marine reserves. Develop a method of establishing marine reserves for high-priority habitat types and functions to protect places where regulations may not adequately protect habitat values and/or functions.

2. Information sharing. Field staff and scientists need to do a better job of sharing and documenting information. There appears to be more known about development impacts to the nearshore than is documented in the literature.

3. Demonstration projects. Develop one or more demonstration projects of bioengineering solutions (using natural site features such as erosion-resistant vegetation) for eroding shoreline banks, preferably on private land. Without this, it is difficult to convince landowners that these solutions will work.

4. Public education. Landowners who buy shoreline properties don't understand shoreline processes and possible limitations of their land. Local workshops for property owners have successfully educated people in several areas and need to be continued. Topics should include bulkheading.

5. Agency education. Staff at state agencies need to better understand what happens at the local level, particularly the logistics of permitting and working with landowners.

6. Local shoreline manager education. Many local staff requested information and training on issues pertinent to protecting the nearshore environment. Specific requests included information on techniques for mitigation, successes and bioengineering solutions.

7. Maps. Shoreline managers need smaller scale, more accurate maps. Current maps (primarily the Coastal Zone Atlas) are outdated and unavailable. Updated information on feeder bluffs and spawning areas for surf smelt was specifically requested.

8. Hearing examiners. Hearing examiners can make decisions about permits without being caught in the political process. Several counties use hearing examiners. Counties without them rely on county commissioners or county councils to arbitrate permitting decisions, which is often time consuming and difficult.

9. Shorelines of statewide significance. Clarify the level of protection that should be required in shorelines of statewide significance.

10. Funding. Shoreline protection programs at all levels of government are underfunded. Staff said that processing permits has become the priority for staff time and other ac-tivities are not getting done. Some local governments do not have any habitat biologists on staff.

Conclusions

The interviews demonstrated that shoreline managers, regulators and scientists witness many human activities that are harming the nearshore environment. Although some shoreline managers are aware that the shoreline is being continually altered, they are not necessarily aware of the connections between those alterations and long-term impacts to the nearshore area and its re-sources. Local ordinances in many jurisdictions are not strong enough to prevent damage to nearshore habitat. Scientists studying the functions and processes of the nearshore environment are concerned about incremental loss of area and functions.

This study analyzed the regulatory system, but it also revealed many other issues of concern relevant to the overall management of the Puget Sound nearshore such as mapping of resources, education of landowners, monitoring and research. All of these important pieces of the management equation appear to be lacking.

Puget Sound nearshore habitats are being lost to a variety of human activities. The greatest culprit was identified as residential development in general and the myriad im-pacts that result from the development. The negative impacts of degraded water quality on nearshore habitat was identified as an emerging issue by two scientists interviewed. People in different regions of Puget Sound had varying perceptions of how nearshore habitat is being lost, but many agreed on some fundamental gaps in the regulatory and management scheme. The current regulatory system does not provide for any one agency or governmental body to oversee or manage the nearshore environment in Puget Sound. Different agencies and governments have different responsibilities. Each local government and tribe has its own set of regulations regarding development and alteration of the shore-line. This encourages a piecemeal approach to resource management and prohibits a holis-tic understanding of the resources, impacts and general health of the nearshore.

A further problem in the regulations is that they are not written to reflect current knowledge, development trends and understanding of the impacts of human development activities. Regulations at all levels need updating and coordination among each other. Many of the counties' shoreline master programs were written in the 1970s and have been minimally updated since then. Local governments have used the growth management process to make some im-provements but are very limited in the staff time that can be devoted to making changes that are not mandatory.

Current tracking systems are inadequate to provide information on development trends and impacts. There is one database at Fish and Wildlife for Hydraulic Project Ap-provals, but the information is unreliable prior to 1990 and even the current data are lim-ited in providing information such as the type of habitat altered or the extent of alteration. The Corps of Engineers has the other database to track their own permit system but it has limitations similar to Fish and Wildlife's database.

Inventory and monitoring are also extremely limited in the nearshore areas. Natural Resources is establishing baseline data for the nearshore, but the current program will not provide information for the entire Puget Sound nearshore for 15-20 years. The lack of monitoring programs inhibits opportunities for testing or evaluating impacts of shoreline development. In circumstances where regulators don't have adequate information on effects of development activities, they often are encouraged to conclude that an activity has less than significant effects in order to complete a permit review.

Shoreline managers, regulators and scientists generally agree that the Puget Sound near-shore environment is suffering from various impacts and different types of losses are occurring. Agencies and other interested parties, however, are unable to adequately document and evaluate the impacts of current development practices for a variety of reasons. Marine resources that rely on the nearshore for part of their life cycle are showing declining populations, but there is a lack of understanding of the relationship between causes and effects. Greater understanding of bio-logical resources that rely on the nearshore, mapping those resources, researching the effects of development on those resources and updating regulations to reflect current knowledge and trends in growth are needed to knowledgeably protect Puget Sound's nearshore environment.

Specific recommendations for improving programs that address nearshore habitat are included in Nearshore Habitat Loss in Puget Sound: Recommendations for Improved Management (Nearshore Habitat Loss Workgroup, 1998).

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